

SCIENTIFIC PROGRAM

SUNDAY, SEPTEMBER 7, 2003

19.00-20.00 Registration at the Restaurant “L’antico casale”, San Martino al Cimino, Viterbo

MONDAY, SEPTEMBER 8, 2003

8.00-9.00 Registration at the Congress Venue and poster set up

9.00-9.20 Opening

Session 1: Biotechnology, Transcriptomics and Proteomics (Chairpersons O.A. Anderson and P.R. Shewry)

9.20-9.40 **P.R. Shewry**, Harpenden, UK

The use of biotechnology to study wheat endosperm development and improve end use quality

9.40-10.00 **A.E. Blechl**, *P. Bregitzer, K. O’Brien, J. Lin, S. Nguyen, O.D. Anderson*, Albany, CA, USA

Agronomic, biochemical and quality characteristics of wheats containing HMW-glutenin transgenes

10.00-10.20 **S. Masci**, *R. D’Ovidio, F. Scossa, C. Patacchini, D. Lafiandra, O.D. Anderson, A.E. Blechl*, Viterbo, Italy

Characterization of glutenin polymers in a transgenic bread wheat line over-expressing a LMW-GS

10.20-10.40 **H.D. Jones**, *G. Pastori, J. Goodwin, P.R. Shewry*, Harpenden, UK

The potential of biotechnology to produce novel gluten phenotypes

10.40-11.10 Coffee break

11.10-11.30 **O.D. Anderson**, *D. Laudencia-Chinguanco, S. Chao, G. Lazo*, Albany, CA, USA

The use of ESTs to analyze the spectrum of wheat seed proteins

11.30-11.50 **P. Tosi**, *R. D’Ovidio, F. Békés, J.A. Napier, P.R. Shewry*, Harpenden, UK

Transgenic expression of epitope-tagged LMW glutenin subunits in durum wheat: effect on polymer size distribution and dough mixing properties

11.50-12.10 *P. Della Cristina, A. Orsi, F. Sparvoli, A. Ceriotti*, Milan, Italy

Folding and assembly of a low molecular weight glutenin subunit

12.10-12.30 **G. Branlard**, *J. Dumur, E. Bancel, M. Merlini, M. Dardevet*, Clermont-Ferrand, France

Proteomic analysis of wheat storage proteins: a promising approach to understand the genetic and molecular bases of gluten components

12.30-12.50 *V. Cunsolo, S. Foti, V. Muccilli, R. Saletti, D. Lafiandra, S. Masci*, Catania, Italy

Mass spectrometric approaches for the characterization of high- and low-molecular weight glutenin subunits

12.50-13.05 General discussion

13.05-14.30 Lunch

Session 2: Environmental effects (Chairpersons G. Branlard and W.J. Hurkman)

14.30-14.50 **W.J. Hurkman**, *C.K. Tanaka, W.H. Vensel, J.H. Wong, Y. Balmer, B.B. Buchanan*, Albany, CA, USA

- Analysis of wheat endosperm proteins during grain development and in response to high temperature using proteomics
- 14.50-15.10 *T. Majoul, E. Bancel, E. Triboi, J. Ben Hamida, G. Branlard*, Clermont-Ferrand, France
- Analysis of the effect of heat stress on wheat storage proteins using the proteomic approach
- 15.10-15.30 *C. Don, G. Lookhart, A.H. Naeem, F. MacRitchie, R.J. Hamer*, Wageningen, the Netherlands
- Glutenin particles are affected by growing conditions
- 15.30-15.50 *E. Johansson, M.L. Prieto-Linde, R. Kuktaite, A. Andersson, H. Larsson*, Alnarp, Sweden
- Grain protein polymer formation: influences of cultivar, environment and dough treatment
- 15.50-16.20 Coffee break**
- 16.20-16.40 *J.M. Carrillo, M. Ruiz, M.C. Martinez, M. Rodriguez-Quijano, J.F. Vázquez*, Madrid, Spain
- Relationship between some prolamin variants and quality parameters at different levels of nitrogenous fertilizer in durum wheat
- 16.40-17.00 *P. Koehler, H. Wieser, R. Gutser, S. von Tucher*, Garching, Germany
- Influence of sulphur fertilisation on the quantitative composition of gluten protein types in wheat flour
- 17.00-17.15 General discussion
- 17.15-18.30 Poster session**

TUESDAY, SEPTEMBER 9, 2003

Session 3: **Gluten rheology and functionality** (Chairpersons **P. Belton** and **F. MacRitchie**)

- 8.15-8.35 *P. Belton*, Norwich, UK
What makes a good theory of gluten viscoelasticity?
- 8.35-8.55 *J. Lefebvre, C. Rousseau, Y. Popineau*, Nantes, France
Viscoelastic and flow behaviour of doughs from transgenic wheat lines differing in HMW glutenin subunits
- 8.55-9.15 *E.L. Sliwinski, P. Kolster, T. van Vliet*, Wageningen, the Netherlands
Large deformation properties of wheat flour and gluten dough in uni- and biaxial extension
- 9.15-9.35 *G. Mann, F. Békés, M. Morell*, Canberra, Australia
Extensional rheology measurements as predictors of wheat quality
- 9.35-9.55 *R. Haraszi, F. Békés, M.L. Bason, J.M.C. Dang, J.L. Blakeney*, Canberra, Australia
Dough mixing studies on the micro Z-arm mixer
- 9.55-10.15 *C. Don, J. Plijter, W. Lichtendonk, R.J. Hamer*, Zeist, the Netherlands
Aggregation kinetics of GMP particles affects dough rheology
- 10.15-10.45 Coffee break**
- 10.45-11.05 *F. MacRitchie, H. Singh*, Manhattan, KS, USA
Polymer concepts applied to gluten behaviour in dough
- 11.05-11.25 *B.J. Dobraszczyk, J.D. Schofield, J. Smewing, M. Albertini, G. Maesmans*, Reading, UK
Rheological mechanisms of stability of bubble expansion in breadmaking doughs
- 11.25-11.45 *R. Kieffer, H. Wieser*, Garching, Germany

Effect of temperature and high-pressure on the functional and chemical properties of gluten

- 11.45-12.05 **M.I.P. Kovacs**, *B.X. Fu*, *S.M. Woods*, *C. Wang*, Winnipeg, Manitoba, Canada
Carbon atom and the thermal stability of wheat gluten proteins: effect on dough properties and noodle texture
- 12.05-12.25 *M. Pommet*, *A. Redl*, *S. Domenek*, *S. Guilbert*, **M.H. Morel**, Montpellier, France
Why dough inflation should have to modify the rate of gluten protein thermosetting
- 12.25-12.45 **H. Larsson**, *H. Hedlund*, Lund, Sweden
On the swelling properties of gluten in the presence of salts and reduced pH
- 12.45-13.00 General discussion
- 13.00-14.30 Lunch**

**Session 4: Genetics and quality
(Chairpersons J.M. Carrillo and D. Lafiandra)**

- 14.30-14.50 **M.C. Gianibelli**, *O.R. Larroque*, *E. De Ambrogio*, *D. Lafiandra*, Canberra, Australia
Effect of the introduction of novel HMW-GS on quality of durum wheat semolina
- 14.50-15.10 **B.J. Butow**, *K.R. Gale*, *W. Ma*, *O. Larroque*, *M.K. Morell*, *F. Békés*, Canberra, Australia
Use of segregating double haploid populations to investigate the effects of *Glu-B1* and *Glu-D1* alleles on dough strength
- 15.10-15.30 **A. Juhász**, *O. Larroque*, *H. Allen*, *J. Oliver*, *M.C. Gianibelli*, Canberra, Australia
Biochemical and molecular characterisation of gluten-forming proteins in a double haploid population of bread wheat and their relation to dough extensibility
- 15.30-15.50 **H. Nakamura**, Tsukuba, Japan
The transmission route through which the common wheat (*Triticum aestivum* L.) has reached Far-East Japan
- 15.50-16.20 Coffee break**
- 16.20-16.40 *L. Li*, **H. Zhonghu**, *R.J. Pena*, Beijing, China
Presence of 1B/1R, *Glu-1* and *Glu-3* and their effect on breadmaking quality in Chinese bread wheat
- 16.40-17.00 **T.M. Ikeda**, *T. Nagamine*, *H. Yano*, Fukuyama, Japan
Characterization of LMW-GS genes and the corresponding proteins in common wheats
- 17.00-17.20 **M.T. Labuschagne**, *E. Koen*, *T. Dessalegn*, Bloemfontein, South Africa
The use of SE-HPLC for wheat quality prediction in two African countries
- 17.20-17.40 **O.R. Larroque**, *M.C. Gianibelli*, *F. Bekes*, *P. Sharp*, *D. Lafiandra*, Canberra, Australia
Biochemical and functional studies of wheat isogenic lines containing single type high molecular weight glutenin subunits (HMW-GS)
- 17.40-17.55 General discussion

WEDNESDAY, SEPTEMBER 10, 2003

**Session 5: Gluten polymers and tools to investigate their structure
(Chairpersons R.J. Hamer and K.R. Preston)**

- 8.30-8.50 *C. Don*, *G. Mann*, *F. Békés*, **R.J. Hamer**, Wageningen, the Netherlands
Linking glutenin particle size to HMW glutenin subunit composition
- 8.50-9.10 **R. Kuktaite**, *H. Larsson*, *S. Marttila*, *K. Brismar*, *M. Prieto-Linde*, *E. Johansson*, Alnarp, Sweden

- Gluten macropolymer in wheat flour doughs: structure and function for wheat quality
- 9.10-9.30 **B. Schurgers**, *W.S. Veraverbeke, J.A. Delcour*, Leuven, Belgium
Critical factors governing gluten protein agglomeration on a micro-scale
- 9.30-9.50 **K.R. Preston**, *S.G. Stevenson, S. You, M.S. Izydorczyk*, Winnipeg, Manitoba, Canada
Application of flow field-flow fractionation and multiangle laser light scattering for size determination of polymeric wheat proteins
- 9.50-10.10 **W. Li**, *P.J. Wilde, B.J. Dobraszczyk*, Reading, UK
Confocal laser scan microscopy of protein, lipid and starch in breadmaking dough
- 10.10–10.25 General discussion
- 10.25-10.55 Coffee break**

**Session 6: Gluten interactions and non-food uses
(Chairpersons: M.H. Morel and Y. Popineau)**

- 10.55-11.15 **L. Day**, *M. Augustin, I.L. Batey, C.W. Wrigley*, Werribee, Australia
Association of non-protein components in wheat gluten with its quality
- 11.15-11.35 **D. Every**, *L.D. Simmons, K.H. Sutton*, Christchurch, New Zealand
Ascorbate improver effects, dough mixing properties and bread quality interdependence on flour protein composition
- 11.35-11.55 **M. Pommet**, *A. Redl, M.H. Morel, S. Guilbert*, Montpellier, France
A way to improve the water resistance of gluten-based biomaterials: plasticization with fatty acids
- 11.55-12.15 **S. Guilbert**, *S. Domenek, M.-H. Morel*, Montpellier, France
Wheat gluten based biomaterials: environmental performance, degradability and physical modifications
- 12.15-12.35 **Y. Popineau**, *C. Mangavel, J. Guéguen*, Nantes, France
Gluten films: effect of composition and processing on properties and structure
- 12.35-12.50 General discussion
- 12.50-14.20 Lunch**

**Session 7: Intolerances and allergies
(Chairpersons A. Curioni and C. Mills)**

- 14.20-14.40 **E.N.C. Mills**, *J.A. Jenkins, S. Griffiths-Jones, P.R. Shewry*, Norwich, UK
The structural and biological relationships of cereal proteins involved in type I allergy
- 14.40-15.00 **H. Wieser**, *W. Engel, J. Ellis, J.S. Fraser, P.J. Ciclitira*, Garching, Germany
Coeliac disease-specific toxicological and immunological studies of peptides from α -gliadins
- 15.00-15.20 **G. Mamone**, *P. Ferranti, D. Melck, F. Tafuro, F. Addeo*, Avellino, Italy
Mass spectrometry as a tool for probing gluten peptide modifications relevant to celiac disease
- 15.20-15.50 Coffee break**
- 15.50-16.10 **D.F. McCarthy**, *E. Gallagher, T.R. Gormley, T.J. Schober, E.K. Arendt*, Dublin, Ireland
Formulation of gluten-free breads using response surface methodology
- 16.10-16.30 **C. Constantin**, *W.D. Huber, G. Granditsch, M. Weghofer, R. Valenta*, Vienna, Austria
The profile of wheat antigens recognized by patients suffering from coeliac disease and IgE-mediated food allergy

- 16.30-16.50 *F. Battais, J.P. Douliez, D. Marion, Y. Popineau, G. Kanny, D.A. Moneret-Vautrin, S. Denery, Nantes, France*
Lipid transfer proteins of cereals in food allergy to wheat
- 16.50-17.05 General discussion
- 17.05-17.20 Concluding remarks